ABSTRACT OF THE DISCLOSURE

The present invention is directed generally to recombinant methods for making a desired polypeptide. These method(s) yield a polypeptide product containing reduced levels of isoform impurities thereof. In particular, the present invention is directed to (1) a recombinant method for preparing growth hormone with reduced isoform impurities thereof and (2) a recombinant method for preparing a growth hormone antagonist, such as pegvisomant, and its protein intermediate, also having reduced isoform impurities thereof. More specifically, the isoform impurities that are decreased by methods of the present invention are the trisulfide and des-phe isoform impurities of growth hormone and growth hormone antagonist (or its intermediate), respectively.